Remote Cognitive Behavioral Therapy (CBT) for Anxious Children

Program description:
These treatments utilize the same principles and techniques as those of other CBT treatments for anxiety; however, they are unique insofar as clients have reduced (if any) face-to-face time with therapists. Clients are supported remotely via email or phone contact. A manual or online program helps to guide progress of the intervention.

Typical age of primary program participant: 10

Typical age of secondary program participant: N/A

Meta-Analysis of Program Effects

Outcomes Measured	Primary or Second-ary Partici-pant	No. of Effect Sizes	Unadjusted Effect Sizes (Random Effects Model)			Adjusted Effect Sizes and Standard Errors Used in the Benefit-Cost Analysis					
						First time ES is estimated			Second time ES is estimated		
			ES	SE	p-value	ES	SE	Age	ES	SE	Age
Anxiety disorder	P	5	-1.14	0.26	0.00	-0.30	0.26	10	-0.13	0.11	15

Benefit-Cost Summary

| The estimates shown are present value, life cycle benefits and costs. All dollars are expressed in the base year chosen for this analysis (2011). The economic discount rates and other relevant parameters are described in Technical Appendix 2.	Program Benefits					Costs	Summary Statistics			
	Partici-pants	Tax-payers	Other	Other Indirect	Total Benefits		Benefit to Cost Ratio	Return on Invest-ment	Benefits Minus Costs	Probability of a positive net present value
	$2,934	$2,265	$1,327	$1,126	$7,653	$741	n/e	n/e	$8,393	96%

Detailed Monetary Benefit Estimates

	Benefits to:				
Source of Benefits	Partici-pants	Taxpayers	Other	Other In-direct	Total Benefits
From Primary Participant					
Earnings via anxiety disorder	$2,488	$915	$0	$461	$3,864
Health care costs for anxiety disorder	$447	$1,349	$1,327	$665	$3,789

Detailed Cost Estimates

The figures shown are estimates of the costs to implement programs in Washington. The comparison group costs reflect either no treatment or treatment as usual, depending on how effect sizes were calculated in the meta-analysis. The uncertainty range is used in Monte Carlo risk analysis, described in Technical Appendix 2.	Program Costs			Comparison Costs			Summary Statistics	
	Annual Cost	Program Duration	Year Dollars	Annual Cost	Program Duration	Year Dollars	Present Value of Net Program Costs (in 2011 dollars)	Uncertainty (+ or – %)
	$217	1	2010	$943	1	2010	-$726	10%

Source: Based on therapist time, as reported in the treatment studies, as well as training costs and a flat fee for materials (e.g., manuals). Hourly therapist cost is based on the latest actuarial estimates of reimbursement by modality in WA State (DSHS).

Cumulative Net Cash Flows Over Time (Non-Discounted Dollars)
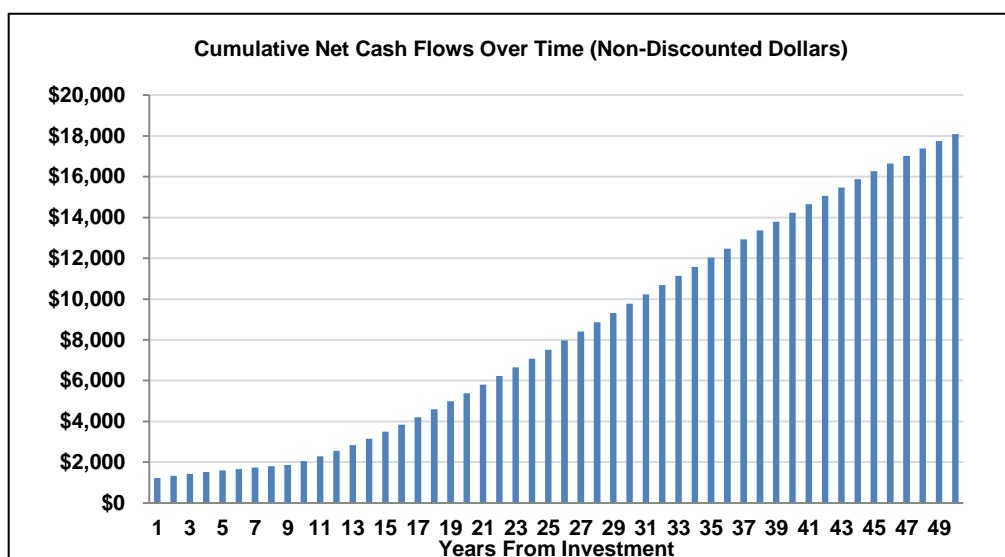
Additional Notes

Some studies included in this analysis compared the program (CBT) to control conditions that did not consist of an active treatment. Because policymakers in Washington are interested in the impact of this program above and beyond currently implemented treatments (i.e., treatment as usual), we reduced the effect size of studies utilizing a no treatment or waitlist control group in half to reflect a smaller impact that would be expected if these studies compared CBT to treatment as usual.

We conducted a meta-regression to test for differences among various formats of CBT for anxious children (remote, individual, group, and parent CBT). The results showed that there were no statistically significant differences in the effect of various formats of CBT on anxiety. These treatments are presented separately, however, because each format is associated with a different program cost.

Multiplicative Adjustments Applied to the Meta-Analysis

Type of Adjustment	Multiplier
1- Less well-implemented comparison group or observational study, with some covariates.	1.00
2- Well-implemented comparison group design, often with many statistical controls.	1.00
3- Well-done observational study with many statistical controls (e.g., IV, regression discontinuity).	1.00
4- Random assignment, with some RA implementation issues.	1.00
5- Well-done random assignment study.	1.00
Program developer = researcher	0.42
Unusual (not "real world") setting	1.00
Weak measurement used	1.00

Multipliers were generated by examining studies for the treatment of children or adolescents with internalizing problems. Because weak measurement and unusual setting designations were extremely rare among these studies, no adjustments were made. Meta-regressions were conducted to test for the impact of different methodological factors on unadjusted effect size. Dummy variables for research design were not significant, indicating that this factor did not impact effect sizes. However, the involvement of program developers in the research was a significant predictor of effect size (B=-.482, p=.077), suggesting that such studies have more negative (i.e., larger) effect sizes than studies in which the developer is not involved in the evaluation. The regression coefficient was used to generate the 0.42 multiplier.

Studies Used in the Meta-Analysis

Khanna, M. S., & Kendall, P. C. (2010). Computer-assisted cognitive behavioral therapy for child anxiety: Results of a randomized clinical trial. *Journal of Consulting and Clinical Psychology, 78*(5), 737-745.

Lyneham, H. J., & Rapee, R. M. (2006). Evaluation of therapist-supported parent-implemented CBT for anxiety disorders in rural children. *Behaviour Research and Therapy, 44*(9), 1287-1300.

March, S., Spence, S. H., & Donovan, C. L. (2009). The efficacy of an internet-based cognitive-behavioral therapy intervention for child anxiety disorders. *Journal of Pediatric Psychology, 34*(5), 474-487.

Rapee, R. M., Abbott, M. J., & Lyneham, H. J. (2006). Bibliotherapy for children with anxiety disorders using written materials for parents: A randomized controlled trial. *Journal of Consulting and Clinical Psychology, 74*(3), 436-444.

Spence, S. H., Holmes, J. M., March, S., & Lipp, O. V. (2006). The feasibility and outcome of clinic plus internet delivery of cognitive-behavior therapy for childhood anxiety. *Journal of Consulting and Clinical Psychology, 74*(3), 614-621.